

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1 (original): Telecommunications radio system for
2 mobile communication services comprising at least one base
3 station, the base station comprising at least two antennas,
4 the base station being located at a site, the base station
5 covering an area, the area being subdivided into a multitude
6 of sectors by the at least two antennas,
7 wherein
8 the site is a high structure with a height of at least 50m
9 from erection ground,
10 the base station is located on the site at a height of at
11 least 50m from erection ground and
12 the at least two antennas are arranged in a first concentric
13 ring in a first orthogonal plane of the longitudinal axis of
14 the site.

1 Claim 2 (original): Telecommunications radio system
2 according to claim 1 in which the height of the site is in
3 the range of 90m to 320m from erection ground and the base
4 station is located on the site at a height in the range of
5 90m to 320m from erection ground.

1 Claim 3 (currently amended): Telecommunications radio system
2 according to ~~claims 1-2~~ claim 2 in which each sector is
3 served by a separate antenna.

1 Claim 4 (currently amended): Telecommunications radio system
2 | according to ~~claims 1-2~~ claim 2 in which the multitude of
3 sectors are served by one or more phase-controlled antenna.

1 Claim 5 (currently amended): Telecommunications radio system
2 | according to ~~claims 3-4~~ claim 4 in which there are at least
3 six sectors.

1 Claim 6 (currently amended): Telecommunications radio system
2 | according to ~~claims 3-4~~ claim 4 in which there are at least
3 12 sectors.

1 Claim 7 (currently amended): Telecommunications radio system
2 | according to ~~claims 3-4~~ claim 4 in which there are at least
3 24 sectors.

1 Claim 8 (currently amended): Telecommunications radio system
2 | according to ~~claims 3-4~~ claim 4 in which there are at least
3 48 sectors.

1 Claim 9 (currently amended): Telecommunications radio system
2 | according to ~~any of the preceding claims~~ claim 8 in which
3 one or more antennas are arranged in a second concentric
4 ring in a second orthogonal plane of the longitudinal axis
5 of the site, the second concentric ring having a larger
6 diameter than the first concentric ring.

1 Claim 10 (original): Telecommunications radio system
2 according to claim 9 in which the first orthogonal plane is
3 the same as the second orthogonal plane.

1 Claim 11 (currently amended): Telecommunications radio
2 system according to ~~elaims 9-10~~ claim 10 in which the number
3 of antennas on the second concentric ring is larger than the
4 number of antennas on the first concentric ring.

1 Claim 12 (currently amended): Telecommunications radio
2 system according to ~~elaims 9-11~~ claim 11 in which the
3 horizontal angular range of the antennas on the second
4 concentric ring is smaller than the horizontal angular range
5 of the antennas on the first concentric ring.

1 Claim 13 (original): Telecommunications radio system
2 according to claim 12 in which the vertical aperture angle
3 of the antennas on the first concentric ring is in the range
4 of 8 to 12 degrees, preferably 10 degrees.

1 Claim 14 (currently amended): Telecommunications radio
2 system according to ~~elaims 12-13~~ claim 13 in which the
3 vertical aperture angle of the antennas on the second
4 concentric ring is in the range of 3 to 6.5 degrees,
5 preferably 5 degrees.

1 Claim 15 (currently amended): Telecommunications radio
2 system according to ~~elaims 11-14~~ claim 14 in which the area
3 is being subdivided into 24 sectors by antennas on the first
4 concentric ring and 72 sectors by antennas on the second
5 concentric ring.

1 Claim 16 (currently amended): Telecommunications radio
2 system according to ~~any of the claims 1-15~~ claim 15 in which
3 the shape and/or size of one or more sectors can be changed
4 by switching on or off one or more antennas.

1 Claim 17 (currently amended): Telecommunications radio
2 system according to ~~any of the claims 1-15~~ claim 15 in which
3 the shape and/or size of one or more sectors can be changed
4 by changing the horizontal angular range of one or more
5 antennas.

1 Claim 18 (currently amended): Telecommunications radio
2 system according to ~~any of the claims 1-15~~ claim 15 in which
3 the shape and/or size of one or more sectors can be changed
4 by changing the vertical aperture angle of one or more
5 antennas.

1 Claim 19 (currently amended): Telecommunications radio
2 system according to ~~any of the preceding claims~~ claim 18 in
3 which at least one antenna is arranged in a third orthogonal
4 plane of the longitudinal axis of the site to cover an area
5 in the proximity zone of the site, the third orthogonal
6 plane being located below a height of 50m.

1 Claim 20 (currently amended): Telecommunications radio
2 system according to ~~any of the preceding claims~~ claim 19 in
3 which the total number of sectors needed to cover the area
4 is calculated as a function of the size of each sector and
5 the required field strength in each sector.

1 Claim 21 (currently amended): Telecommunications radio
2 system according to ~~any of the preceding claims~~ claim 20 in
3 which all antennas operate at one frequency.

1 Claim 22 (original): Telecommunications radio system
2 according to claim 21 in which a conventional bases station
3 operating at a different frequency is placed within the area
4 for handling local high volumes of traffic.

1 Claim 23 (original): Base station for use in a
2 telecommunications radio system, the base station comprising
3 at least two antennas, the base station being located at a
4 site, the base station covering an area, the area being
5 subdivided into a multitude of sectors by the at least two
6 antennas,
7 wherein
8 the site is a high structure with a height of at least 50m
9 from erection ground,
10 the base station is located on the site at a height of at
11 least 50m from erection ground and
12 the at least two antennas are arranged in a first concentric
13 ring in a first orthogonal plane of the longitudinal axis of
14 the site.

1 Claim 24 (original): Antenna for use in a base station for
2 use in a telecommunications radio system for mobile
3 communication services, the base station being located at a
4 site, the base station covering an area, the area being
5 subdivided into a multitude of sectors, at least one of the
6 sectors being served by the antenna,
7 wherein

8 the site is a high structure with a height of at least 50m
9 from erection ground,
10 the base station is located on the site at a height of at
11 least 50m from erection ground and
12 the antenna and at least one other antenna being arranged in
13 a first concentric ring in a first orthogonal plane of the
14 longitudinal axis of the site.

1 Claim 25 (original): Mobile network comprising a
2 telecommunications radio system for mobile communication
3 services comprising at least one base station, the base
4 station comprising at least two antennas, the base station
5 being located at a site, the base station covering an area,
6 the area being subdivided into a multitude of sectors by the
7 at least two antennas,
8 wherein
9 the site is a high structure with a height of at least 50m
10 from erection ground,
11 the base station is located on the site at a height of at
12 least 50m from erection ground and
13 the at least two antennas are arranged in a first concentric
14 ring in a first orthogonal plane of the longitudinal axis of
15 the site.